

malady. It is well known that the virus of rabies may produce abortive attacks of hydrophobia or other nervous manifestations. Depression of spirits, local pain, and constriction of the throat followed Dr. Adams' inoculation with the virus of a rabid deer in the Pasteur laboratory. Whether there is an idiopathic form of the disease—the so-called “spontaneous hydrophobia”—as fatal as rabies and closely resembling it, remains a question difficult to decide. L.F.B.

THE PATH OF MOTOR AND SENSORY REINFORCEMENTS.

Dr. S. Weir Mitchell said that since the discovery of sensory and motor reinforcements he had been constantly on the outlook for chances to study the tracks followed by the impulses aroused by these agencies. Such opportunities he considered rare, and perhaps neglected, for neurologists hardly realize this important means of examining muscle reflexes. The histories of two cases were detailed. The first was that of a female, aged 37, who exhibited a faint bluish appearance on the gums, but there were no positive evidences of lead poisoning. She had suffered from difficulty in walking, numbness of the legs and pains in the back and thighs, with some hyperæsthesia of the skin. When first seen her condition was somewhat as follows: legs slightly œdematous, inability to completely control bladder or rectum or to stand alone. Has occasional tremor of the legs. Epigastric reflex present—sole +. Patellar reflex increased. Bending great toes causes contraction of quadriceps femoris, and at the ankle there is clonus on slight flexion and also at knees by pulling patellar. The leg fails to drop when supported at the knee, and when bent exhibits the “lead pipe condition.” With knee bent a slight blow on the patellar may give no response, but on clutching the hands a marked one is obtained. Both hands give this reinforcement and also contraction of facial muscles. There is no reinforcement by pain, cold or heat applied to the legs or arms. The history, he said, was that of a spinal sclerosis involving the direct anterior columns. By exciting the knee-jerk feebly voluntary acts of the hand or face increase it; hence the channels by which reinforcements attain to the ganglia involved were open. The volitional force could not reach these centres but the reinforcements can.

The second case was that of a girl aged seven, who after a fall, had paralysis of the legs, bladder and rectum. There was slight knee-jerk in the legs, reinforced by a grimace, clenching the hands or a pin prick. No ankle clonus. Later on knee-jerk was obtained in the right leg,

reinforced by sensory and voluntary motion. This patient was treated with carbonate of ammonium and digitalis, followed by cod liver oil and syrup of the iodide of iron. Extension in the bed was also employed, and under this treatment sensation was greatly improved. Dr. Mitchell remarked that in these cases the chief differences were that in the first motor reinforcement is possible, while sensation failed, and in the second the way for sensory and motor reinforcements is open. Though the will channel be shut, a reinforcement channel is open, which he considered offers some hope for ultimate cure. (*"Medical News,"* March 22, 1890).

THE INSANE IN MASSACHUSETTS.

In a paper bearing this subject, Dr. A. R. Moulton endeavors to show on the one hand that the insane in the hospitals and asylums of Massachusetts, numbering about 5,000, are to a large degree wards of the State, and receive humane treatment; while on the other hand, the hundreds in almshouses and substitutes are defenceless, with no one to speak for them, and whose unfortunate condition is due to a bad system. As a side issue, he says that a small number of unqualified people are trying to maintain themselves by the care of the mentally sick. He asks for suggestions as to how best to meet these conditions. (*"Boston Med. & Surg. Journal,"* March 20, 1890).

REFLEX NEUROSES.

M. A. Starr, M. D., Ph. D., in writing on the above topic, says that the grey matter of the nervous system is collected into three masses: the spinal and medullary centres, the basal ganglia, the cortex. The function of the first was reflex action; of the second, automatic action; and of the third, conscious and voluntary action. Anything increasing the normal inhibitory action of the higher centres or removing it might bring about disturbances of reflex action. The reflex power may be interfered with in several ways: thus, strychnine exaggerates it; it may be suspended by sudden violent irritations, as occurs in severe injuries of the abdomen or head; moderate simultaneous irritations may impair it. The arrest of reflex activity might be voluntarily produced by intention, or involuntarily by cerebral hæmorrhage or fright. The act of control should be constantly exerted to preserve the balance of power and proper harmony of